

In memoriam Paolo Sassone-Corsi (1956–2020)

Angela Giangrande & Pierre Chambon^{*} 



Image credits: Courtesy of Cecile Rochette-Egly

The Institute of Genetics and Molecular and Cellular Biology (IGBMC) and the scientific community mourn the death of Paolo Sassone-Corsi, who abruptly passed away during the night of July 22nd, at his home in Laguna Beach, California. Paolo was the Donald Bren Professor and the Director of the Center for Epigenetics and Metabolism that he created at the School of Medicine of the University of Irvine. He was also an external scientific member of the Max Planck Institute for Immunobiology and Epigenetics in Freiburg, an associated member of the King Abdullah University of Science and Technology, a fellow of the American Association for the Advancement of Science and a member of the Inserm International Unit 1233 “Epigenetic Control of neuronal plasticity” co-directed with his wife, the neurobiologist Emiliana Borrelli. <https://sassonecorsilaboratory.org/>

Paolo made seminal contributions in several fields during the last 40 years. His world class research on transcriptional regulation and epigenetics pioneered the link of these processes with the circadian clock and the metabolism. An EMBO member since

1990, he was conferred many awards, including the EMBO Gold Medal, the Rosen FRM prize, the Grand Prix Liliane Bettencourt, the Grand Prix Charles-Léopold Mayer de l'Académie des Sciences, the Silver Medal of the CNRS, the IPSEN Award in Endocrinology, the Danish August and Marie Krogh Medal, and the Leonardo da Vinci Gold Medal, to name just a few. His excellence and involvement in science are also witnessed by his contribution to many advisory and editorial boards.

Born in 1956, Paolo Sassone-Corsi was a brilliant graduate student at the Università Federico II in Naples, and in 1979, he moved together with Emiliana Borrelli as a postdoc to the laboratory of Pierre Chambon, the Unit 184 of the Inserm and Laboratoire de Génétique Moléculaire des Eucaryotes (LGME of the CNRS), within the Faculty of Médecine of Strasbourg. He was a major player of the extraordinary intellectual atmosphere that contributed to the discovery of transcriptional promoter/enhancer sequences and of their interactions with transacting factors. He then moved in 1986 to the laboratory of Inder Verma in San Diego, where he further exploited the potential of molecular biology in unravelling the intracellular signalling pathway linked to the activity of the proto-oncogenes *fos* and *jun*.

In 1989, he returned to Strasbourg as Directeur de Recherche at the CNRS, where his team identified the CRE Modulator (known as CREM), as a second messenger within the cyclic AMP signalling pathway. The final name of this transcription factor could not have been more appropriate for this discovery, as it turned out to be “la

crème de la crème” discovery in the laboratory! The pivotal finding that CREM expression is controlled by the circadian clock made him rapidly realizing that time is a parameter common to all living organisms and biological processes, and also that time-regulated biological processes are even more stringent when involving the biological clock. This discovery reconnected him to his early passion for astronomy and stargazing at the telescope over many starry nights in Italy and was just at the start of a long and fruitful scientific “expedition” in the field of chronobiology! With more than two hundred papers on the topic, his team dissected the cellular and molecular mechanisms controlling the circadian clock, an adaptive ancestral process allowing life on the Earth. Amongst his ground-breaking discoveries, he markedly contributed to the elucidation of the connections between the brain “central clock” (about 20,000 neurons of the suprachiasmatic nucleus) and the “peripheral clocks” present in all organ and tissue cells. He also showed that CLOCK, a central component of the circadian pacemaker, is a histone acetyltransferase (HAT). Clearly, chronobiology has remained his leitmotif for almost 30 years.

In 2006, Paolo was recruited as the head of the Department of Pharmacology at the School of Medicine of the University of Irvine (California), where he further expanded his research on the connections and feedback loops between circadian rhythms, metabolism and epigenetics. This led him to demonstrate the importance of the biological clock on our everyday life, from metabolism to cancer and personalized medicine.

IGBMC, Illkirch, France

^{*}Corresponding author. E-mail: Chambon@igbmc.fr

DOI 10.15252/embr.202051603 | EMBO Reports (2020) 21: e51603 | Published online 21 September 2020

His initial discovery of a cycling transcription factor could have led Paolo to dissect the fine details of a single molecular pathway. Instead, he went far beyond and, as a “Renaissance” man, he grasped its potential for opening many doors in different fields. He was driven by an unlimited curiosity, enthusiasm and energy that he charmingly transmitted to his many collaborators. His captivating lectures summarized years of data in simple and beautifully exposed models.

Beside writing an amazing number of highly cited scientific articles (more than 450), he is the co-author of a book of reflections conceived with his friend, the Italian writer Erri De Luca. Their exchange of letters on how human beings live according to the Universe laws of physics is an example of Paolo’s ability to transmit his scientific passion by perfectly tailoring his language to the audience. Paolo was truly an all-round Renaissance scientist.

Many members of the IGBMC have known and worked with Paolo, and his death is a very sad event for the scientific community. We feel deeply sorry and express our deepest sympathy to Emiliana, who lost the companion of her life and with whom Paolo shared the same passion for research. We have lost a close friend. May the prematurely arrested existence of Paolo inspire the young generation of scientists to explore the secrets of life and reach novel frontiers.